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ecology and environment, inc.

160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811

International Specialists in the Environment

MEMORANDUM

TO: Lisa Nelson, EPA Region IX

FROM: Jim James, Ecology and Environment, Inc. JmJ

DATE: August 29, 1990

SUBJECT: Completed Work

cc: Marcia Brooks, E & E FIT

Attached is the following completed:

PA X   PA Review___   SSI___   LSI___   SIRe____

Other________________________________

Site Name: Chemonics Lab Division McKenzie (572)

EPA ID #: AZD057907883 (572)

City, County: Phoenix, Arizona

State Recommendation:
(for Reviews only)

FOR EPA USE ONLY

CERCLIS Lead: PA Complete
Recommend ~~med.~~ priority SI
~~Fund~~ lead
5/28/91
Lisa Nelson
5-28-91

re/chem/cwm

recycled paper

Purpose: CERCLA Preliminary Assessment

Site: Chemonics Laboratory Division McKenzie
724/734 Southern Pacific Drive
Phoenix, Arizona
Maricopa County

Site EPA ID Number: AZD057907883

TDD Number: F9-9003-014

Program Account Number: FAZ0340PAA

FIT Investigators: Robert Easley
Paul Brown
Chris Nelson

Date of Inspection: May 23, 1990

Report Prepared By: Robert Easley RE

Through: Paul Brown PB

Report Date: August 29, 1990

FIT Review/Concurrence: James M. James 9-6-90

Submitted To: Lisa Nelson
Site Assessment Manager
EPA, Region IX

ecology and environment, inc.
160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811
International Specialists in the Environment

1. INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA) the U.S. Environmental Protection Agency has tasked Ecology and Environment Inc.'s Field Investigation Team (FIT) to conduct a Preliminary Assessment of Chemonics Laboratory Division McKenzie in Phoenix, Arizona. This report summarizes FIT's investigative efforts.

2. SITE DESCRIPTION

2.1 SITE LOCATION AND OWNER/OPERATOR HISTORY

The Chemonics Laboratory Division McKenzie site consists of two separate properties located adjacent to each other at 724 and 734 East Southern Pacific Drive in Phoenix, Arizona (Township 1 North, Range 5 West, Section 24, Gila and Salt River Base Line and Meridian; Latitude: 33° 26′ 40", Longitude: 112° 03′ 49") (see Figure 1). Combined, the two properties cover 6 acres of flat, mostly paved land. The site is situated in a light industrial area with a small residential neighborhood located less than 0.25 miles south of the site (1,2). The Southern Pacific Transportation Company has a railroad stockyard to the north and to the east of the site. An intermittent river, the Salt River, is located 1.3 miles south of the site (3).

The two properties located at 724 and 734 East Southern Pacific Drive are currently owned by separate entities; however, they are combined in this Preliminary Assessment due to the possible migration of contaminants from the 734 parcel to the 724 parcel (see Figure 2). Southern Pacific Transportation Company (Pacific Transportation) has owned the 734 property since the 1920s (4). Currently, Pacific Transportation leases the 734 property to Chemonics Industries, Inc (Chemonics), which subleases the 734 property to several businesses including Canyon Industries, Inc., Available Metals Refining (EPA ID #AZT050010362), and Leffingwell Chemical Corporation (see Figure 3) (1). The Arizona Department of Environmental Quality (ADEQ) conducted a Preliminary Assessment on Canyon Industries, Inc., in February 1988 (5). Chemonics subleased the 734 property to Government Innovators (EPA ID #AZD981673544) and McKenzie Laboratories (EPA ID #AZD981415086) until October 1989 when these businesses relocated. Located within the same 734 complex, but registered at different addresses, Chemonics subleases property to S&H Cabinets and Alameda Chemical and Scientific. S&H Cabinets, builders of cabinets and other furniture, is located at 912 East Southern Pacific Drive. Alameda Chemical and Scientific, suppliers of laboratory chemicals and supplies, is located at 922 East Southern Pacific Drive (1).

The 734 property has a long history of industrial uses. Table 1 is a list of the companies that have conducted business operations at the 734 property since the 1920s (1,4). From the 1940s through the 1960s, business operations at the site primarily involved fertilizer distribution (4). Arizona Fertilizers, Inc., one of the first companies to sell fertilizers at the site, also formulated pesticides at the site

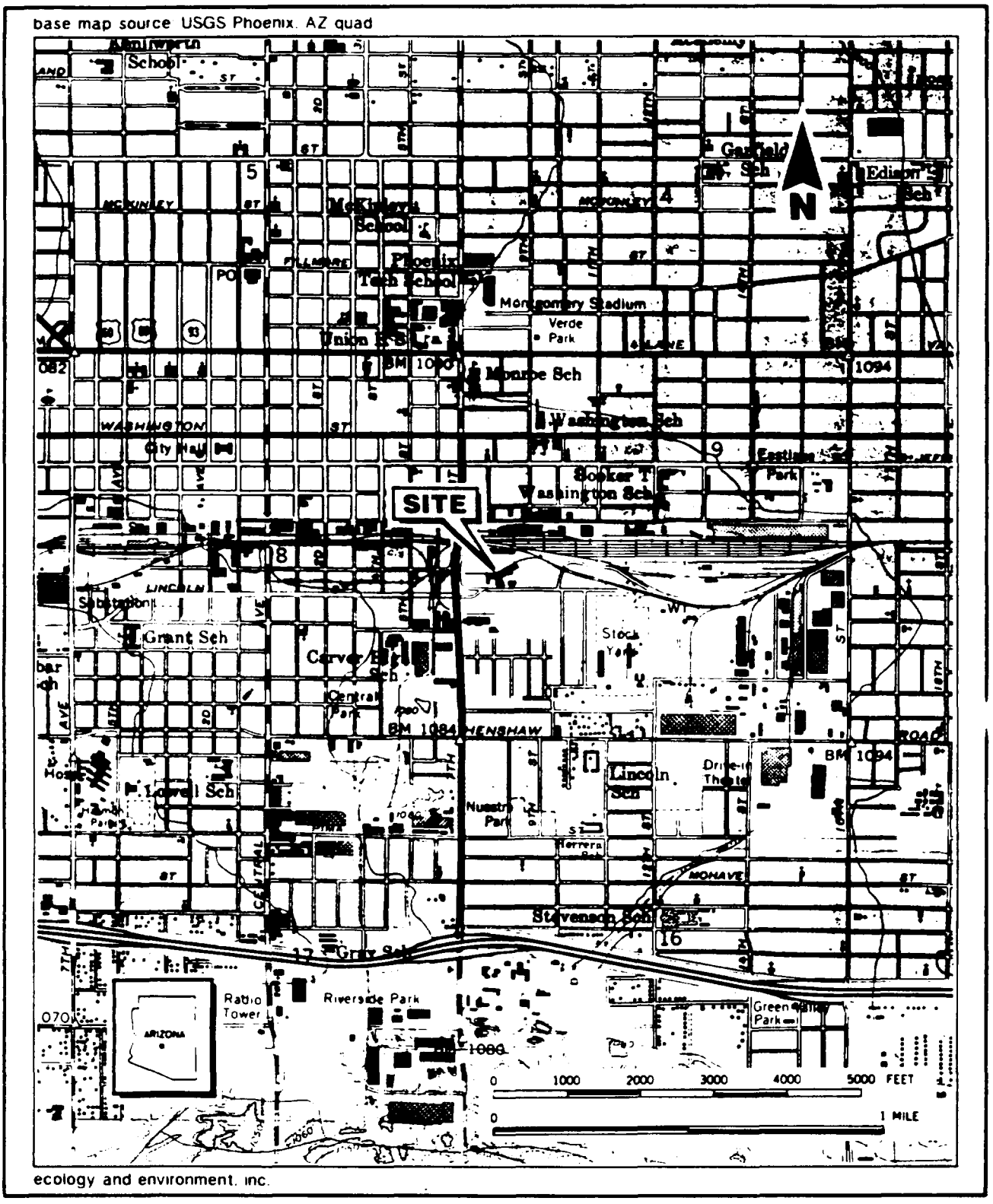

Figure 1

SITE LOCATION MAP

CHEMONICS LAB DIVISION McKENZIE

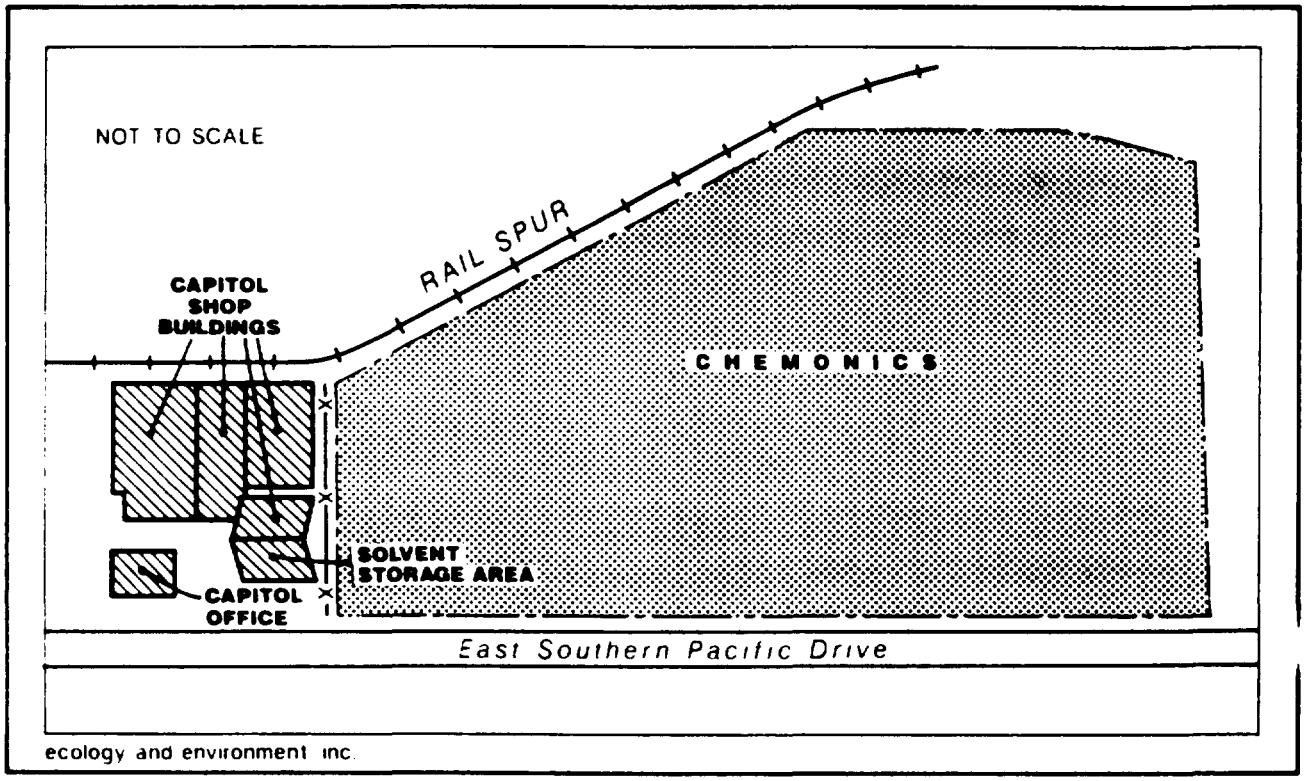

Figure 2

Facility Map of the 724 and 734 Properties

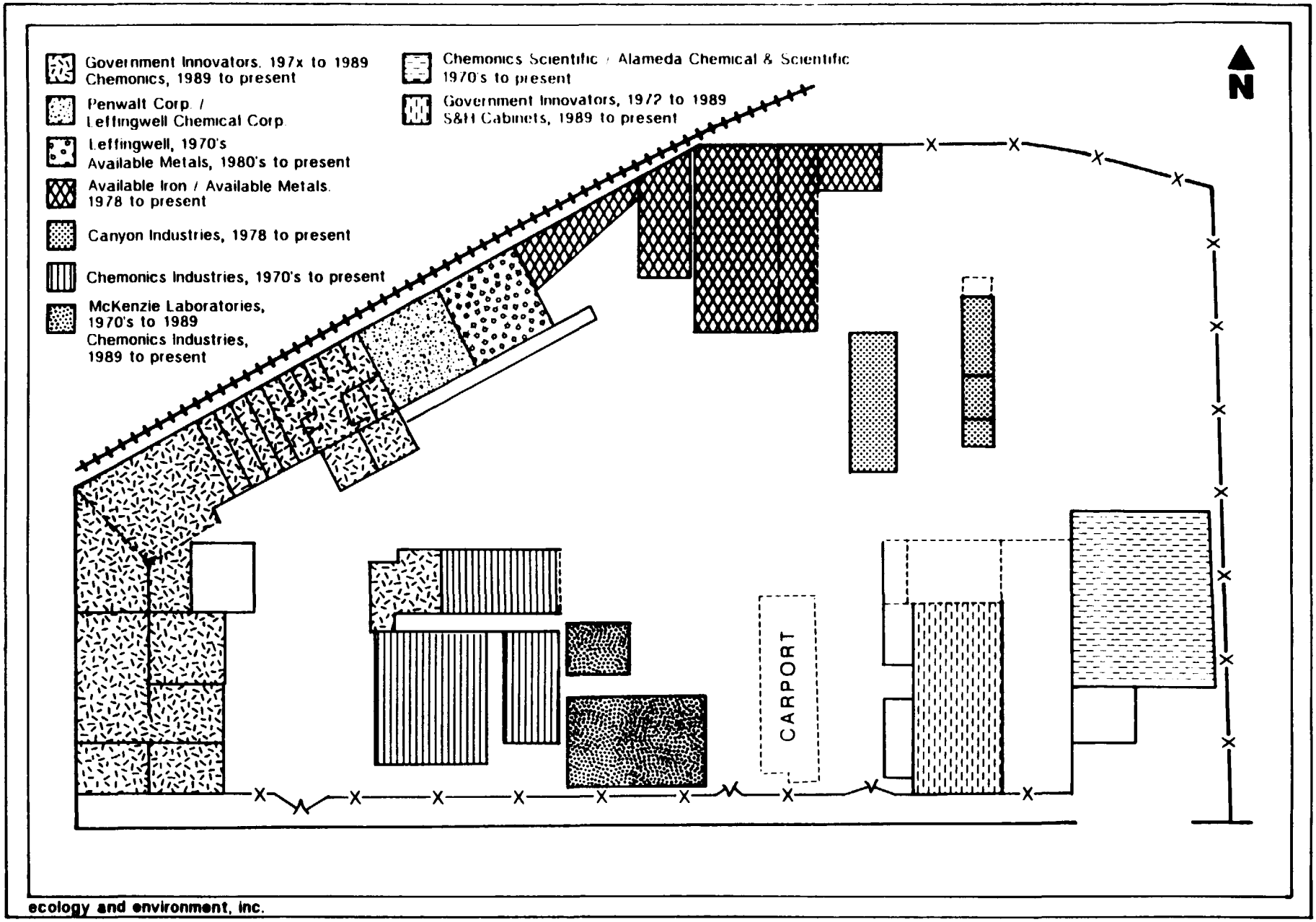

Figure 3

Facility Map of the 734 Property

Table 1

Companies Conducting Business at the 734 East Southern Pacific Drive Property

Company	Year	Business Operations Conducted On Site
Southern Pacific Transportation Company	1920s to 1940s	Rail Yard, Engine Repair Yard
Arizona Natural Products	1940s	Fertilizers
Arizona Fertilizers, Inc.	1940 to 1954 1946 to 1953	Fertilizers Pesticide Formulation
Arizona Fertilizer and Chemical	1958 to 1961 1966 to 1971	Fertilizers and Storage of Pesticides Fire Retardant Formulation
McKenzie Laboratories	1956 to 1985	Agricultural Testing Laboratory
Arizona Agrochemical Corporation	1961 to 1971 1966 to 1971	Fertilizers and Storage of Pesticides
Cortez Chemicals	1965 to 1970	Manufacture of Pool Chemicals
Georgia Pacific	1970 to 1973	Manufacture of Pool Chemicals
Arrow Van and Storage Company	1970 to 1972	Commercial Warehouse
Chemonics Industries, Inc.	1971 to Present	Storage of Fire Retardant, Fire Retardant Research and Development, Repairs and Maintenance of Fire Retardant Equipment
Chemonics Scientific/ Alameda Chemical and Scientific (922 E. Southern Pacific Dr.)	1971 to Present	Warehouse and Sales of Laboratory Chemicals and Supplies
Government Innovators	1972 to 1989	Manufacture of Garbage Trucks
Arizona Chemical Packaging	1973 to 1976	Manufacture of Pool Chemicals
Available Iron and Metals/Available Metals Refining Corporation	1978 to Present	Metal Scrapyard/Reclamation of Precious Metals from Scrap Electronic Parts

Canyon Industries	1978 to Present	Manufacture of De-icing Fluid, Disinfectants, Cleaning Compounds, and Deodorants
Leffingwell Chemical Corporation	1978 to Present	Agricultural Chemical Warehouse
Pennwalt Corporation	1980 to 1988	Agricultural Chemical Warehouse
Chemport Chemicals	1985 to 1986	Warehouse Products
McKenzie Laboratories	1985 to 1989	Agricultural Testing Laboratory

from 1946 to 1953 (11,37) In 1953 Arizona Fertilizers relocated its pesticide formulation operations to Chandler, Arizona and reduced its operations at the 734 property to just fertilizers (11,37). Arizona Fertilizers became Arizona Fertilizer and Chemical Company in 1958 which later became Arizona Agrochemical Corporation (Arizona Agrochem) in 1961 (see Figure 4). Erly Industries bought Arizona Agrochem in 1968 and sold it to Valley Nitrogen in 1971. Chemonics Laboratories, Chemonics Industries, and Chemonics Scientific, which were subdivisions of Erly Industries in the 1980s, also operated at the site. During the 1980s, Chemonics Scientific and Chemonics Laboratories were sold and became Alameda Chemical and Scientific and McKenzie Laboratories, respectively (4).

Capitol Engineering (Capitol), a metal component fabricator, has owned the property located at 724 East Southern Pacific Drive since the late 1940s or early 1950s. Hazardous materials generated by Capitol at the 724 property have consisted of small volumes of paint and paint thinner. Prior to Capitol, Pacific Transportation owned the 724 property (6).

2.2 FACILITY PROCESSES/WASTE MANAGEMENT

2.2.1 HISTORICAL

Pacific Transportation, the first known business at both the 724 and 734 properties, may have operated a rail yard and an engine repair yard at the site from the 1920s to the 1940s (4). No information was available to FIT regarding waste management practices at the engine repair yard. Most of the companies that have operated at the site from the 1940s to the 1960s primarily sold fertilizers and did not generate hazardous waste (4) Arizona Fertilizers formulated pesticides at the site from 1946 until 1953 when it relocated its pesticide formulation operations to Chandler, Arizona (11,37). After 1953 pesticides were believed to be stored on site by Arizona Fertilizers, Arizona Fertilizer and Chemical Company, and Arizona Agrochem but not formulated (11,37). Pesticide formulation at the site primarily entailed blending the pesticides with a carrier, such as a dust, to prepare the pesticide for application in the field (1). No information was located by FIT regarding waste management practices during the formulation of chlorinated pesticides at the 734 property.

Government Innovators manufactured residential mechanized refuse collection systems (garbage trucks) at the 734 property from the early 1970s to 1989. Most of the hazardous waste generated by Government Innovators (EPA ID # AZD981673544) stemmed from painting operations and included paint and paint thinners (7,8). Government Innovators cleaned the paint spray equipment by rinsing it with solvents. After cleaning the paint spray equipment, the waste solvents were collected and run through an electric distillation unit in order to recover the solvents for re-use (7). The sludge or still-bottoms remaining from the distillation process were mixed with a rubberizing agent and used as an undercoating for the trucks (8). Other hazardous wastes generated by Government Innovators include hydraulic oil, water-soluble machining oils (coolants), and parts cleaning solvents (7). Government Innovators also collected diesel fuel in 55-gallon drums. Waste hydraulic oil generated

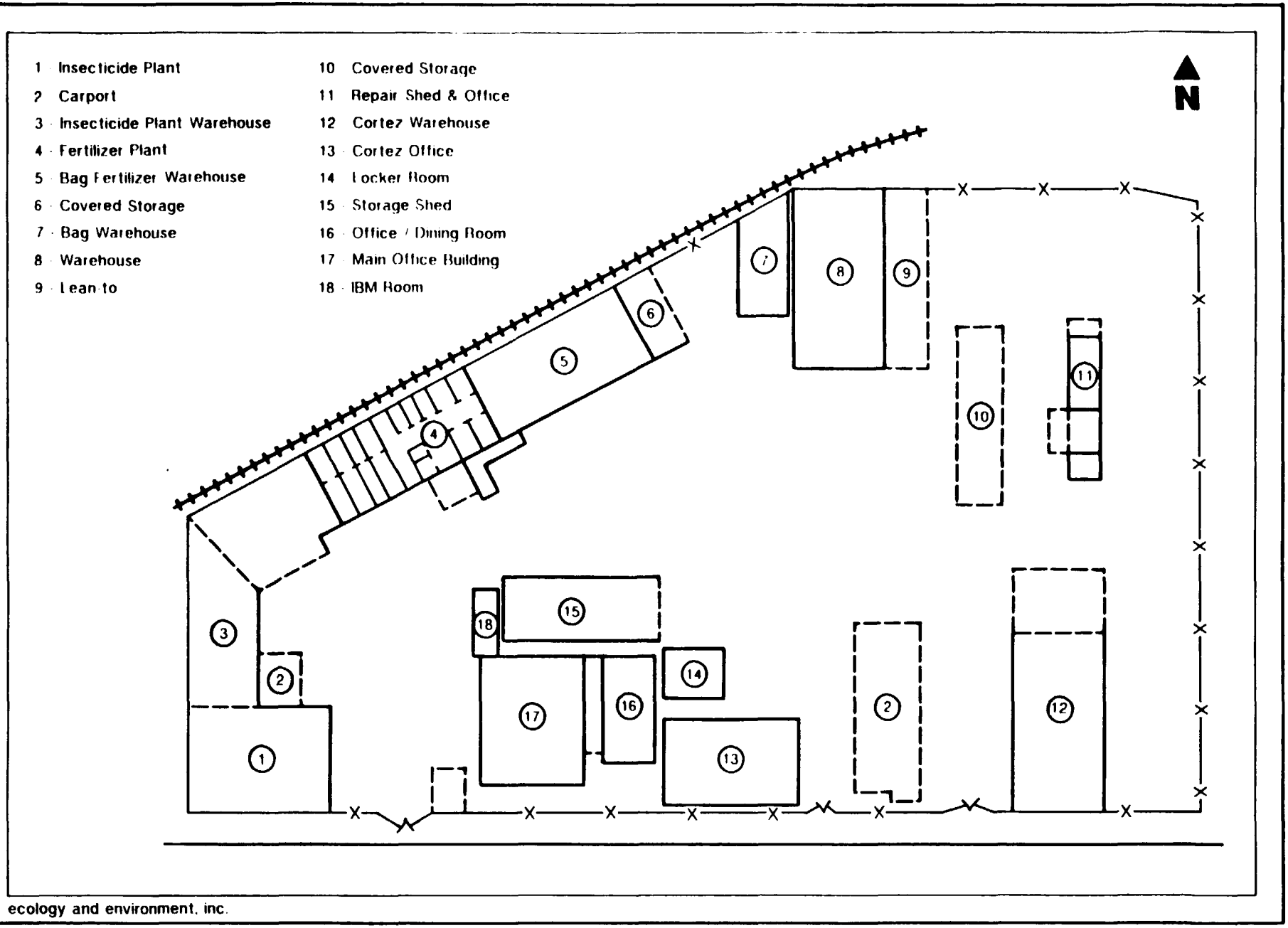

Figure 4

FACILITY MAP OF ARIZONA AGROCHEMICAL CORPORATION,
JANUARY 1966

during the repair of the trucks was collected in drain pans and recycled in an oil storage tank (7). Southwest Solvents, Inc., now called Southwest Industrial Recyclers (EPA ID # AZD009015389), handled distillation operations of the reclaimed solvents (7). Southwest Industrial Recyclers has also removed drums of waste petroleum distillate. Safety-Kleen Company of Elgin, Illinois picked up the containers of spent parts-cleaning solvent and left fresh solvent approximately twice a month (7).

Chemonics/McKenzie Laboratories was an agricultural laboratory which tested water and plant tissues for nutrient contents and agricultural crops and soils for pesticide residues (1). Hazardous waste generated by McKenzie Laboratories at the 734 property included spent solvents used in the laboratory (9). The laboratory began using solvents in 1972 and since then the volume of solvent use has not exceeded 2 gallons per day (9). Prior to May 1986, McKenzie Laboratories disposed of solvents into an evaporation pan located outside its laboratory (9). The evaporation pan was 12 feet long, 2 feet wide, and 1 foot deep (1). Another pan was placed below the evaporation pan to catch any leaks or spills. The residues remaining in the pan after evaporation were packaged in 55-gallon drums and removed by a certified hazardous waste management firm (9). Use of the evaporation pan ceased in 1987 and solvents were disposed of into 55-gallon drums (9). From October 1982 to June 1986, Chemical Waste Management, Inc. of Kettleman Hills, California (EPA ID # CAT000646117) removed the 55-gallon drums from the 734 property (9). From October 1986 to December 1986, CTI removed the drums from the 734 property and Rinchem removed the drums from the 734 property from February 1987 until McKenzie Laboratories relocated in October 1989 (9).

Other businesses which have operated at the site are Cortez Chemicals, Georgia Pacific, and Arizona Chemical Packaging. These companies manufactured pool chemicals at the site during the 1960s and 1970s. No information was located regarding the hazardous waste management practices of these companies (11,37).

2.2.2 CURRENT

The companies which currently conduct business operations at the 734 property are Available Metals Refining, Chemonics, and Leffingwell Chemical Corporation. Capitol operates at the 724 property. Chemonics is a fire-retardant manufacturer which has a contract with the U.S. Department of Forestry. The office at 734 East Southern Pacific Drive acts as the corporate office for Chemonics. Chemonics does not manufacture the retardant at this site. At the site, Chemonics stores the fire retardant (Fire-Trol) for sale and distribution, rebuilds and repairs fire-retardant application equipment, and conducts tests on the fire retardant for research and development (1). Chemonics has a small laboratory on site to test the fire retardant (10). Chemonics assured FIT that no solvents are used when testing the fire retardant (1). Some of the principal components of the fire retardant are ammonium sulfate and sodium ferrocyanite, which are not listed as CERCLA hazardous substances in 40 CFR 302.4 (1). Chemonics is not classified as a generator of hazardous waste at the site in the RCRA data base as of May 8, 1990.

Leffingwell Chemical Corporation (Leffingwell) stores agricultural chemicals such as fertilizers and pesticides in a warehouse at the site. Leffingwell does not generate waste at the site which contains hazardous substances (1).

Between 1978 and 1982 Available Iron and Metals operated at the 734 property primarily as a metal scrapyard. In 1982 Available Iron and Metals became Available Metals Refining Corporation (Available Metals) and began the reclamation of precious metals (gold and silver) from scrap electronic parts: primarily from the electronic circuit boards of computers (11,14). This process entails shredding and incinerating the circuit boards, extracting the gold in a cyanide bath, and electrolytically precipitating the gold out of the cyanide bath. The gold flakes are scraped off the cathode and melted in a furnace on site. The spent cyanide solutions remaining from the electrolysis process are incinerated. The resulting cyanide ash is sold to a smelter for further refining. Particulates from the incinerator are filtered out with a fiberglass, Teflon-coated baghouse filter. The old expired Teflon-coated baghouse filters are incinerated in order to reclaim the precious metals contained in the filter material. Except for the small amount of evaporated and incinerated emissions from the site, no hazardous wastes are generated on site. However, FIT did observe one 55-gallon drum of waste oil on site during the site reconnaissance (14).

Capitol, which is located at the 724 property, fabricates various metal components such as valves, fans, cyclones, and hoppers. Processes conducted at the site include the sheering, pressing, welding, and painting of metal components. Most of the hazardous wastes generated by Capitol involve painting of the metal components and include waste paint and paint thinner. Capitol stores the waste paint in 55-gallon drums which Safety-Kleen picks up once a month (12). Other products which Capitol uses in small volumes at the site include aluminum coating, dry lube, anti-spotter aerosol, Top Magic cutting fluid, cold galvanizing fluid, and crack check developer (13).

3. APPARENT PROBLEM

On July 29, 1983 the Arizona Department of Health Services sampled an irrigation well located in Eastlake Park approximately 1 mile east of the site (15). Analyses indicated the groundwater was contaminated with numerous volatile organic compounds (VOCs). In an attempt to determine possible sources of groundwater contamination, ADEQ sent out a questionnaire to facilities in the East Washington Area requesting information on the usage and handling of hazardous materials (15). Based on the responses from the questionnaire, several of the facilities located at 724 and 734 East Southern Pacific Drive were listed as possible sources of groundwater contamination because many of the companies at the site once used solvents. In addition, Chemonics indicated in the response to the questionnaire that three dry wells and numerous above-ground storage tanks existed on site. The site was listed in the CERCLA Information System (CERCLIS) in June 1987.

After being listed as a "Priority Facility" by ADEQ in the Draft Phase I

Report, Eastlake Park Area, in October 1988, Capitol contracted a private consulting firm to conduct an environmental assessment of its property located at 724 East Southern Pacific Drive and at the 415/419 South 7th Street property, located adjacent to the 724 property (6). While no solvent contamination was detected in the soils at 724 East Southern Pacific Drive, the soils were contaminated with chlorinated pesticides above ADEQ cleanup levels (16). Because no pesticide products were ever associated with the 724 property it is possible that Arizona Fertilizers, which formulated pesticides at the 734 property from 1946 to 1953, is a potential source of the pesticide contamination.

During an inspection of the Government Innovators facility by the Arizona Department of Health Services (ADHS) in February 1986, ADHS observed three perforated 55-gallon drums on site, probably containing paint waste or diesel fuel. In the area near the perforated drums, the soil was visibly stained with waste (17). Government Innovators hired a private consultant in November 1986 to analyze the soil below the concrete where a spill had occurred. Analyses did not detect any solvents in the soil above the detection limit of 10 mg/kg (18). This sampling event did not include an analysis for pesticides in soil. No other sampling has been conducted at 734 East Southern Pacific Drive.

4. REGULATORY INVOLVEMENT

Due to a complaint of a recurrent chemical odor emanating from the industrial area near East Southern Pacific Drive, ADHS conducted a site inspection on February 19, 1986 of the Available Metals, Capitol Engineering, Canyon Industries, Chemonics Industries, and Government Innovators facilities (19). From the investigation, ADHS recommended additional investigation of the facilities. Government Innovators was cited by ADEQ, formerly ADHS, for hazardous waste violations under the Arizona Administrative Code R9-8-1801 (20). ADEQ completed a Preliminary Assessment of Canyon Industries in February 1988 (5).

Government Innovators, McKenzie Laboratories, and Available Metals are listed as generators of hazardous waste in the Resource Conservation and Recovery Act (RCRA) data base. The Hazardous Waste Compliance Unit of ADEQ has inspected these facilities to ensure compliance with RCRA regulations. ADEQ has determined that Available Metals is exempt from regulations under RCRA because all waste streams are recycled (21,22).

The Maricopa County Department of Health Services, Bureau of Air Pollution Control, has granted a permit to Government Innovators for painting and welding on site and to Available Metals to use a remelt furnace, granulator process, and an incinerator (23).

The EPA Underground Injection Control Unit inspected the site in 1987 and in June 1989. Following the last inspection, EPA concluded that no action was necessary regarding the dry wells on site (24).

As part of the Phase I Report of the East Washington Study Area, ADEQ sent a questionnaire to the facilities at the site. ADEQ also sent a letter to Chemonics in June 1989 recommending that Chemonics conduct soil sampling to determine if pesticide contamination exists at the 734

property (25).

5. HRS FACTORS

The Hazard Ranking System (HRS) is a scoring system used to assess the relative threat associated with actual or potential releases of hazardous substances from sites. It is the principal mechanism EPA uses to place sites on the National Priorities List (NPL). EPA has proposed revisions to the HRS, pursuant to the Superfund Amendments and Reauthorization Act of 1986 (SARA). FIT has evaluated the following proposed revised HRS factors relative to this site.

5.1 WASTE TYPE AND QUANTITY

The volume of pesticide waste generated at the site when Arizona Fertilizers was a tenant of the 734 property is unknown. Soil sampling on the Capitol property at 724 East Southern Pacific Drive indicated that the soils in a 130-yard by 25-yard area are contaminated with lindane, chlordane, DDT, dieldrin, and toxaphene (see Table 2). Pesticide contamination was detected in soil samples taken from 0.5 feet to 2.5 feet below ground surface (bgs) (16). Since the pesticide contamination at the 724 property probably originates from operations conducted by Arizona Fertilizers, the soils located at 734 East Southern Pacific Drive may be contaminated with pesticides as well (11,37).

Table 2

Highest Detected Levels of Pesticides in On-Site Soils

	Chlordane	DDD	DDE	DDT	Dieldrin	Toxaphene
Sample Result (mg/kg)	4.9	2.9	2.1	1.7	1.3	6.0
ADEQ Action Levels (mg/kg)	0.15	[--------5.0--------]*			-	5.0

* Action limit for DDD, DDE, and DDT combined

In addition, the following hazardous materials have also been present on site: solvents, paint, paint thinner, cyanide, and waste oil. According to the Generator Annual Hazardous Waste Report for 1987, McKenzie Laboratories generated approximately 3,450 kilograms of solvent waste per year (26). In 1987, Government Innovators estimated that the company generated approximately 2,100 kilograms per year of hazardous waste consisting of waste oil and waste paint (8). Arizona Department of Health Services (DHS) observed three punctured drums probably containing diesel fuel or paint waste at the Government Innovators facility. Capitol uses approximately 144 gallons of paint per year and 55 gallons of paint thinner per year. Other products used by Capitol which contain hazardous substances are aluminum coating, dry lube, anti-spotter aerosol, Top Magic Cutting Fluid, cold galvanizing fluid, and crack check

developer (27). Many of these products contain solvents such as 1,1,1-trichloroethane and xylene (13). Capitol does not use more than 40 gallons of these products per year (13). FIT observed approximately thirty 55-gallon drums containing cyanide and approximately 15 drums containing cyanide ash at the Available Metals facility during the site inspection (14). In addition, FIT observed one 55-gallon drum of waste oil on site (14).

The cyanide drums at the Available Metals facility were located inside the Available Metals building protected from the weather. The drums appeared to be in good condition with no visible leaks (14). In an inspection by ADHS in 1986, ADHS observed three punctured 55-gallon drums at the Government Innovators facility (17). Small volumes (5 gallons per year) of solvent spills may have occurred at the Chemonics/McKenzie Laboratories when Chemonics/McKenzie Laboratories used the evaporation pan as a method of disposal (1,8).

5.2 GROUNDWATER

The site is located in the Salt River Valley Basin, a basin composed of several thousand feet of sedimentary deposits (15). The aquifers in the area are primarily unconfined and are composed of unconsolidated, medium- and coarse-grained sediments (15). Groundwater at the site generally flows in a westerly direction, but it is known to vary depending on rainfall and the flow of the Salt River (15). The depth to the groundwater table beneath the site ranges from 40 feet to 80 feet below ground surface (bgs) (15). The aquifers near the site are unconfined in the first 200 feet bgs (28). The closest active drinking water well is 9 miles north of the site (29). Located approximately 2.7 miles northwest of the site are two municipal wells, well numbers 70 and 71, which were closed in 1982 due to trichloroethene contamination (30). The source of contamination for these two wells is not known, although ADEQ is currently investigating potential sources of contamination for these two municipal wells in the West Central Phoenix area (30). Drinking water from wells in Phoenix are blended with surface water from the Colorado, Salt, and Verde Rivers and serve a population in Phoenix of approximately 1 million people (29,31).

No observed release from the site to groundwater has been documented. The site, however, does have a high potential for a release since there are three dry wells on site (1). The dry wells are approximately 25 feet bgs and were constructed in 1979 and 1980 in order to solve the poor drainage problems on site (1). As part of the Phase I Report of the East Washington Area, ADEQ has sampled numerous wells for VOCs. Approximately 1.5 miles west of the site, in the probable direction of groundwater flow, several wells have been contaminated with the following VOCs above the EPA Maximum Contaminant Level (MCL): 1,1-dichloroethene, tetrachloroethene, and trichloroethene (15). Many of the wells located west of the site have also been contaminated with the following hazardous chemicals at levels below MCLs but above detection limits: 1,1-dichloroethane, 1,2-dichloroethane, trans-1,2-dichloroethene, 1,1,1-trichloroethane, 1,1,2,2-tetrachloroethane, toluene, and dibromochloromethane (15). McKenzie Laboratories, Government Innovators, Capitol, and possibly Southern Pacific Transportation Company have used

some of these chemicals in their operations, but the volume of these solvents used at the site is believed to be small. In sum, there appears to be a small possibility that this site may have contributed to some of the groundwater contamination documented near the site.

The annual net precipitation in Phoenix is approximately 0.5 inches per year (32,33).

5.3 SURFACE WATER

The Salt River is an intermittent river located 1.3 miles south of the site (3). No other significant sources of surface water lie within 2 miles of the site. No observed release to the Salt River has been documented. The site does not appear to have a potential for a release, due to the flatness of the site and to the numerous storm drains and dry wells near the site which appear to divert runoff water away from the river (1). Some fishing occurs in the Salt River, but the Arizona Department of Fish and Game recommends that no one eat fish caught from the river (34). The Salt River is usually dry and only flows after water is released from upstream dams (5). The stretch of the Salt River near the site does not support a habitat for any sensitive species (35). The two-year, 24 hour rainfall for the area is 1.6 inches (38).

5.4 AIR

No air sampling has been conducted at the site. The site has a moderate potential for pesticide contaminated soils to release to air via fugitive dust since the site is situated in an arid region of Arizona. As mentioned before, documented soil contamination exists at the 724 property at depths ranging from 0.5 to 2.5 feet bgs (16). Since the contamination may be a result of operations conducted by Arizona Fertilizers at the adjacent 734 property, the soils at the 734 property may be contaminated with pesticides as well (11,37). The soils at the 734 property have not been analyzed for pesticides (12). The area north of the 724 and 734 buildings is not paved (1,12). Since most of the surface on the south side of the buildings at both the 724 and 734 property is paved, the potential for pesticide migration may be averted at most of the site (1,12).

Available Metals has an air quality permit to operate the furnace, granulator process, and incinerator on site (23). Available Metals has a recirculation mechanism for the cyanide drums in order to recirculate the air from inside the warehouse to the outside (12). During FIT's review of the file from the Maricopa County Department of Health Services, no air violations were documented at the Available Metals facility.

No sensitive environments exist within 4 miles of the site (35). The population distribution within 4 miles of the site is presented in Table 3 (36).

Table 3

Population Distribution Within 4 Miles of the Site

Distance (miles)	Population
On-site*	65
0 - 0.25	992
0.25 - 0.5	993
0.5 - 1.0	11,836
1.0 - 2.0	33,704
2.0 - 3.0	30,777
3.0 - 4.0	40,000

* On-site population based upon number of workers on site.

5.5 ON-SITE

Lindane, DDT, chlordane, dieldrin, and toxaphene have been detected in the soils behind Capitol's main shop in what Capitol refers to as the rail spur area (16). The potential for on-site exposure to pesticides in this area appears low since access to the site by the general public is prevented by an 8-foot high fence surrounding the site (1,12). In addition, Chemonics has a security guard on site 24 hours a day (1). Neither Chemonics nor Capitol use the rail spur area (1,12). Capitol has the door from the shop area to the rail spur area locked at all times (12). Pesticides may have migrated beyond the fence of the Chemonics and Capitol property to the north. However, the two properties behind Capitol and Chemonics are occupied by abandoned buildings and a vacant, grassy area owned by Southern Pacific Transportation Company and Smith Pipe and Steel. Approximately 993 people live within 0.25 miles of the site. Approximately 13,821 people live within 1 mile of the site (36).

6. SUMMARY OF FIT INVESTIGATIVE ACTIVITIES

FIT conducted a site inspection of the Chemonics Laboratory Division McKenzie site on May 23, 1990. FIT, represented by Robert Easley, Paul Brown, and Chris Nelson, interviewed Kathy Lacey of McKenzie Laboratories and David Grisa and Lloyd Aderhold of Chemonics Industries, Inc. Kathy Lacey is the laboratory director of McKenzie Laboratories. David Grisa, who currently works for a different firm, was the former director of environmental safety for Chemonics. Lloyd Aderhold is the current director of environmental safety for Chemonics. During the interview, the site history and hazardous waste management practices at the site were discussed. After the interview a tour of the Chemonics facility took place.

Past business operations at the site were discussed during the interview

as well as current operations conducted by Chemonics. FIT was shown the three dry wells currently located on site (For more information see the Site Reconnaissance Interview and Observations Report) (1).

A separate inspection of the Available Metals facility took place the same day. FIT interviewed Edward Isaac, president of Available Metals, and John Davis, foreman of Available Metals. After the interview, Edward Isaac gave a tour of the facility.

FIT also inspected the Capitol facility. Representing Capitol in the interview were David Porter, mechanical engineer for Capitol, Edward Ricci, private consultant, and Ken Hodson, Capitol's lawyer. David Porter explained Capitol's hazardous waste management practices. Afterwards, FIT was given a tour of the facility. During the tour, FIT was shown the painting area and the area behind the Capitol building that is contaminated with pesticides.

FIT conducted a search of ADEQ's files later that day. Files were also revieved from the Maricopa County Department of Health Services, Bureau of Air Pollution Control, as well as from the EPA Underground Injection Control Unit.

7. EMERGENCY RESPONSE CONSIDERATIONS

While the soils at the site are contaminated with pesticides above ADEQ action levels, an emergency removal action does not appear necessary. The area of pesticide contamination is not accessible to the public, although the full extent of the pesticide contamination is not known. Pesticide contamination may extend beyond the boundaries of the site.

8. SUMMARY OF HRS CONSIDERATIONS

The site is located at 724 and 734 East Southern Pacific Drive in Phoenix, Arizona. The site is situated in a light industrial area with a small neighborhood located 0.25 miles south of the site. An intermittent river, the Salt River, is located 1.3 miles south of the site. The site covers 6 acres of flat, mostly paved, land. The site has a long history of industrial uses including diesel engine repair, fertilizer storage, pesticide formulation, metal fabrication, agricultural analytical laboratory, manufacturing of mechanized refuse collection systems, precious metal reclamation, and research and development of fire retardants.

Pesticide contamination has been detected above ADEQ action levels in the soils at 724 East Southern Pacific Drive. Since Arizona Fertilizers may be a source of the pesticide contamination, the soils at 734 East Southern Pacific Drive might be contaminated with pesticides as well. Groundwater near the site is contaminated with volatile organic compounds. Spills of waste paint, paint thinner, waste oil, and solvents have occurred at the site, although the volume of these spills is unknown. No information was located regarding the hazardous waste management practices of Arizona Fertilizers or of Southern Pacific Transportation Company. Three dry wells were installed at the site to solve the drainage problems at the site.

The significant factors of the proposed revised HRS associated with this site are:

- Uncontained hazardous substances on site;
- Moderate potential for contaminants to migrate to groundwater;
- Regional groundwater contamination possibly attributable to the site;
- Moderate potential for a documented release to air;
- Low potential for a release to surface water;
- No sensitive environments within 4 miles of the site.

9. EPA RECOMMENDATION

	Initial	Date
No Further Action under CERCLA	_____	_____
High-Priority SSI under CERCLA	_____	_____
Medium-Priority SSI under CERCLA	JO	5-25-91
Further Action Plan under RCRA	_____	_____

Notes:

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APPENDIX A

CONTACT LOG AND REPORTS

PA/SI CONTACT LOG

Facility Name: Chemonics Lab Div McKenzie
Facility ID: AZD057907883

Name	Affiliation	Phone #	Date	Information
Bert Thompson	U.S. Geological Survey	602-242-5410	5/2/89	The aquifers in the first few hundred feet near the site are unconfined, which means they are interconnected.
Frank Blanco	City of Phoenix, Water Production	602-262-7454	12/29/90	See Contact Report.
Chuck Graf	ADEQ	602-257-2104	1/5/90	See Contact Report.
Bill Silvey	Arizona Fish and Game	602-942-3000	3/16/90	See Contact Report.
Wayne Janis	City of Phoenix, Water Production	602-262-6627	3/16/90	See Contact Report.
Lowell Carty	ADEQ	602-257-2356	4/21/90	Lowell said he will send the file on Chemonics.
Leslie Patrick	U.S. Fish and Game	602-379-4720	4/22/90	See Contact Report.
Lloyd Aderhold	Chemonics	602-262-5401	4/23/90	Informed him of SSI. He requested a letter of introduction. He said Chemonics currently manufactures fire retardants and fertilizers.
Ed Ricci	WSA, Inc.	602-381-1844	4/25/90	See Contact Report.

Lloyd Aderhold	Chemonics	602-262-5401	4/28/90	See Contact Report.
Lloyd Aderhold	Chemonics	602-262-5401	5/4/90	See Contact Report.
Lloyd Aderhold	Chemonics	602-262-5401	5/8/90	Lloyd agreed to a site visit on the morning of May 23, 1990. He said he had access to the vacant buildings and to Leffingwell.
Ed Isaac	Available Metals	602-252-6146	5/8/90	Ed agreed to a site visit on May 23, 1990.
Ed Ricci	WSA, Inc.	602-381-1844	5/8/90	Ed agreed to a site visit on May 23, 1990. He said he would set it up with Capitol Engineering, Inc.
Ed Isaac	Available Metals	602-252-6146	5/16/90	Ed confirmed the May 23 date for a site visit. He said to bring a letter of introduction to the facility during the visit.
Lloyd Aderhold	Chemonics	602-262-5401	5/21/90	We set up the site reconnaissance for 8:30 at Chemonics on 5/23/90.
Kathy Lacey	McKenzie Laboratories	602-257-6984	5/21/90	Kathy will accompany FIT during the reconnaissance on 5/23/90.
Ed Isaac	Available Metals	602-252-6146	5/21/90	Ed will meet FIT for the reconnaissance at 11:00 on 5/23/90.
Ed Ricci	WSA	602-381-1844	5/21/90	Ed will set up the site reconnaissance with Capitol for 1:00 on 5/23/90.

Bee Shrive	ADEQ, Haz Waste Compliance Unit	602-257-2211	5/21/90	Bee agreed to a file search at 3:00 on 5/23/90.
Lloyd Aderhold	Chemonics	602-262-5401	5/23/90	See Site Reconnaissance Interview and Observations Report.
Ed Isaac	Available Metals Refining	602-252-6146	5/23/90	See Site Reconnaissance Interview and Observations Report.
David Porter	Capitol Engineering	602-245-7624	5/23/90	See Site Reconnaissance Interview and Observations Report.
John Davis	Available Metals Refining	602-252-6815	6/1/90	See Contact Report.
Lesley Higgins	EPA, Underground Injection Control Unit	415-705-2111	6/1/90	Lesley said she would try and locate the report by Brian Cox of the Available Metals inspection on June 5, 1989.
Lowell Carty	ADEQ	602-257-2356	7/3/90	See Contact Report.
Lloyd Aderhold	Chemonics	602-262-5401	7/3/90	See Contact Report.
Martin Zeleznic	EPA, Underground Injection Control Unit	415-705-2111	7/17/90	Martin said he would try locate the report on the Available Metals facility.
Gene Bond	Bureau of Air Pollution Control	602-258-6381	7/18/90	See Contact Report.
Martin Zeleznic	EPA	415-705-2111	7/30/90	See Contact Report.

Frank Feffer	Chemonics	602-262-5401	7/31/90	See Contact Report.
Michelle Kinard	ADEQ	602-257-2137	8/15/90	See Contact Report.
Lloyd Aderhold	Chemonics	602-262-5401	8/28/90	See Contact Report.

CONTACT REPORT

AGENCY/AFFILIATION: City of Phoenix		
DEPARTMENT: Water Production		
ADDRESS/CITY: 5204 East Thomas Road, Phoenix		
COUNTY/STATE/ZIP: Maricopa, Arizona 85034		
CONTACT(S)	**TITLE**	**PHONE**
1. Frank Blanco		602-262-7454
2.		
E & E PERSON MAKING CONTACT: Helena Brykarz		**DATE:** 12/29/90
SUBJECT: Phoenix drinking water supply		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

The city of Phoenix receives 92% of its drinking water from surface water sources (SRP, Central Arizona Canal).

The remaining 8% is from groundwater from wells within Phoenix. These two water sources are treated and blended together. They serve a population of 990,000 - this excludes the populations from Scottsdale and Mesa, which also receive Phoenix water.

CONTACT REPORT

AGENCY/AFFILIATION: Arizona Department of Environmental Quality		
DEPARTMENT: Groundwater Hydrology		
ADDRESS/CITY: 2005 North Central, Phoenix		
COUNTY/STATE/ZIP: Maricopa, Arizona 84004		
CONTACT(S)	**TITLE**	**PHONE**
1. Chuck Graf	Mgr. Superfund Hydrology Unit	602-257-2104
2.		
E & E PERSON MAKING CONTACT: Kenyon A. Larsen		**DATE:** 1/5/90
SUBJECT: Current status of area/Hydrology		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

The Eastlake Park Plume is now called the East Washington Area by ADEQ.

The current project manager at that site is Lowell Carty.

The Phase I Summary Report was finalized sometime in 1989. This report consisted of a compilation of analytical data on the plume as well as some new data. There was limited well and soil sampling for this report. Included in this report was a ranking of nearby facilities on the possibility of their contribution to the contamination plume, based on a survey. The Phase I report identified 8-10 facilities that are suspected to be contributing to the contamination plume.

The Phase I Report is not yet completed. For this report, ADEQ will look closer at the facilities identified as high priority based on the Phase I surveys. ADEQ will also get better information on the boundary of the plume and the extent of contamination.

This is probably one large plume according to Chuck Graf.

Mr. Graf also mentioned that this plume may be the end of the Motorola Plume from their 52nd facility.

CONTACT REPORT

AGENCY/AFFILIATION: Arizona Fish and Game		
DEPARTMENT: Game		
ADDRESS/CITY: 2222 W. Greenway Phoenix		
COUNTY/STATE/ZIP: Maricopa, Arizona 85023		
CONTACT(S)	**TITLE**	**PHONE**
1. Bill Silvey		602-942-3000
2.		
E & E PERSON MAKING CONTACT: Carrie M. Austin		**DATE:** 3/16/90
SUBJECT: Fishing in Salt River		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

The Salt River is an intermittent river. However, effluent and runoff do flow into it. Some nearby residents fish in the river, but no fish catch data is available. The department recommends that any fish caught from the river not be consumed.

CONTACT REPORT

AGENCY/AFFILIATION: City of Phoenix		
DEPARTMENT: Water Production		
ADDRESS/CITY: 455 North 5th Street, Phoenix		
COUNTY/STATE/ZIP: Maricopa, Arizona 84004		
CONTACT(S)	**TITLE**	**PHONE**
1. Wayne Janis	Superintendent	602-262-6627
2.		
E & E PERSON MAKING CONTACT: Carrie M. Austin		**DATE:** 3/16/90
SUBJECT: Drinking water supply		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

3/16/90

Sources of drinking water for Phoenix are the Colorado, Salt, and Verde Rivers, and groundwater. Groundwater enters the system at each well location, is treated with the surface water supply, and is blended into the drinking water system. The population of Phoenix is approximately 1 million people.

3/19/90

The closest active drinking water well to the site is #146 A(3-3) 30cac at 1621 W. Palmer, near Dunlap and 19th Avenue, which is located approximately 9 miles north of the site.

CONTACT REPORT

AGENCY/AFFILIATION: U.S. Department of Fish and Game		
DEPARTMENT:		
ADDRESS/CITY: Phoenix		
COUNTY/STATE/ZIP:		
CONTACT(S)	**TITLE**	**PHONE**
1. Leslie Patrick		602-379-4720
2.		
E & E PERSON MAKING CONTACT: Robert Easley		**DATE:** 4/22/90
SUBJECT: Sensitive Species		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

According to Leslie, the Salt River does not support any sensitive environments 15 miles downstream of the site. The Salt River is located approximately 1.3 miles south of the site. No sensitive environments live within 4 miles of the Chemonics site.

CONTACT REPORT

AGENCY/AFFILIATION: Water Resources Associates, Inc.		
DEPARTMENT:		
ADDRESS/CITY: 2702 North 44th Street, Suite 101-B, Phoenix		
COUNTY/STATE/ZIP: Maricopa, Arizona 85008		
CONTACT(S)	**TITLE**	**PHONE**
1. Ed Ricci	Vice President	602-381-1844
2.		
E & E PERSON MAKING CONTACT: Robert Easley		**DATE:** 4/25/90
SUBJECT: Sampling information		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

4/25/90

According to Ed, DDE and chlordane were detected in the rail spur area adjacent to the Chemonics property. 1,1-dichloroethane and 1,1,1-trichloroethane were detected in a sump used for surface water runoff. He said the contaminated soils in the sump located at 415 South 7th Street were removed. He did not believe any more contamination existed in the sump, although no more sampling in the sump was conducted. He said that soil samples did not detect any contamination in the dry wells located at 419 South 7th Street. He said Capitol Engineering initiated the site investigation of their property on their own in order to clear its name and sell its property.

CONTACT REPORT

AGENCY/AFFILIATION: Chemonics Industry, Inc.		
DEPARTMENT:		
ADDRESS/CITY: 734 East Southern Pacific Drive, Phoenix		
COUNTY/STATE/ZIP: Maricopa, Arizona 85034		
CONTACT(S)	**TITLE**	**PHONE**
1. Lloyd Aderhold	Environmental Safety Officer	602-262-5401
2.		
E & E PERSON MAKING CONTACT: Robert Easley		**DATE:** 4/28/90
SUBJECT: Chemonics property information		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

4/28/90

According to Lloyd, Southern Pacific Transportation Company leases the property at 734 East Southern Pacific Drive to Chemonics. Chemonics subleases the property at 734 to the following companies:

Canyon Industries
McKenzie Laboratories, Inc.
Government Innovators, Inc.
Available Metals Refining Corp.
Leffingwell

Chemonics also leases the property at 922 East Southern Pacific Drive to Alameda Chemical and Scientific of Arizona, Inc. Lloyd mentioned that McKenzie Laboratories and Government Innovators have recently moved this past year. Chemonics does not lease Capitol Engineering's property located at 724 East Southern Pacific Drive. The property at 734 East Southern Pacific Drive covers a 4.5 acre lot and each company operates in separate buildings.

5/4/90

Lloyd said the companies at 734 East Southern Pacific Drive do not have distinguishing addresses. However, McKenzie Laboratories does use the address - 734 A East Southern Pacific Drive. Available Metals has a different P.O. Box of 2711. He said he would be gone the week of May 14.

7/3/90

The building behind their main office is used as a lab to test the Fire Trol (the fire retardant). Chemonics is a subsidiary of Erly Companies. The sodium ferrocyanite in the Fire Trol keeps the ammonium sulfate from caking. Lloyd does not believe sodium ferrocyanite is toxic. He said the brand name for sodium ferrocyanite is Y P Soda and a company called Degusa manufactures it.

8/28/90

Regarding the letter (facsimile) Lloyd sent yesterday, Lloyd said that Frank Feffer, a retired employee, and himself discussed past operations at the site in order to get more accurate historical information of the site. Lloyd also looked at past leases to determine what businesses operated at the site and when. The three pool chemical manufacturers at the site operated in the same building in which Available Metals currently operates. Arizona Fertilizers was the only company that formulated pesticides at the site. Arizona Fertilizers relocated its pesticide formulation operations to Chandler, Arizona in 1953. However, Arizona Fertilizers, Arizona Fertilizer and Chemical Company, and Arizona Agrochemical Corporation probably stored the pesticides in a warehouse on site.

CONTACT REPORT

AGENCY/AFFILIATION: Available Metals Refining		
DEPARTMENT:		
ADDRESS/CITY: 734 East Southern Pacific Drive, Phoenix		
COUNTY/STATE/ZIP: Maricopa, Arizona 85034		
CONTACT(S)	**TITLE**	**PHONE**
1. John Davis	Foreman	602-252-6146
2. Ed Isaac	President	602-252-6146
E & E PERSON MAKING CONTACT: Robert Easley		**DATE:** 6/1/90
SUBJECT: Past operations at Available Metals		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

According to John, the Phoenix Fire Department and another unknown group removed two or three drums from behind its facility near the railroad around 1983. Available Metals has six full time shop workers and five office employees. Available Metals started precious metal refining in 1982. Before 1982, the facility was a scrapyard and was called Available Iron and Metals. Available Iron and Metals has operated at 734 East Southern Pacific Drive since 1978. Ed Isaac said he would send a copy of his Air Quality Permit.

CONTACT REPORT

AGENCY/AFFILIATION: Arizona Department of Environmental Quality		
DEPARTMENT: Water Quality Assurance Revolving Fund Unit, East Washington Area		
ADDRESS/CITY: 2005 North Central Avenue, Phoenix		
COUNTY/STATE/ZIP: Maricopa, Arizona 85004		
CONTACT(S)	**TITLE**	**PHONE**
1. Lowell Carty	Study Area Project Manager	602-257-2356
2.		
E & E PERSON MAKING CONTACT: Robert Easley		**DATE:** 7/3/90
SUBJECT:		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

Lowell sent a letter in July 1989 to Chemonics Industries and to Smith Pipe and Steel recommending that sampling be conducted on its properties to determine if pesticide contamination exists adjacent to the Capitol Engineering property. Currently, sampling adjacent to the Capitol Engineering property is voluntary.

CONTACT REPORT

AGENCY/AFFILIATION: Maricopa County Department of Health Services		
DEPARTMENT: Bureau of Air Pollution Control		
ADDRESS/CITY: P.O. Box 2111, Phoenix		
COUNTY/STATE/ZIP: Maricopa County, AZ 85001		
CONTACT(S)	**TITLE**	**PHONE**
Gene Bond	Custodian of Records	602-258-6381
2.		
E & E PERSON MAKING CONTACT: Robert Easley		**DATE:** 7/18/90
SUBJECT: Air permits		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

Gene said that Government Innovators had an Air Quality permit for painting and welding at the facility. Available Metals has an Air Quality permit to operate the remelt furnace, granulater process (metal shredder), and the incinerator. Gene said he would send the file for the two companies.

CONTACT REPORT

AGENCY/AFFILIATION: EPA		
DEPARTMENT:		
ADDRESS/CITY: San Francisco		
COUNTY/STATE/ZIP:		
CONTACT(S)	**TITLE**	**PHONE**
1. Martin Zeleznic		415-705-2111
2.		
E & E PERSON MAKING CONTACT: Robert Easley		**DATE:** 7/30/90
SUBJECT:		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

Martin said the Underground Injection Control Unit made two inspections of the Chemonics site. One inspection was in 1987 and the other was in June 1989. Martin said no further action was deemed necessary following the last inspection. He said he would send a copy of the 1989 inspection report.

CONTACT REPORT

AGENCY/AFFILIATION: Chemonics Industries, Inc.		
DEPARTMENT:		
ADDRESS/CITY: 734 East Southern Pacific Drive, Pheonix		
COUNTY/STATE/ZIP: Maricopa County, Arizona		
CONTACT(S)	**TITLE**	**PHONE**
1. Frank Feffer	President	602-262-5401
2.		
E & E PERSON MAKING CONTACT: Robert Easley		**DATE:** 7/31/90
SUBJECT: Ownership history		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

According to Frank, Southern Pacific Transportation Company (Pacific Transportation) probably operated at the site since the 1920s. Pacific Transportation, which currently leases the 734 East Southern Pacific Drive property to Chemonics, operated a rail yard and a repair yard for diesel engines at the site in the 1920s and 1930s. Arizona Natural Products was probably the first company to lease the 734 East Southern Pacific Drive property from Pacific Transportation. Arizona Natural Products, a fertilizer company, leased the property from Pacific Transportation in 1942. Arizona Natural Products later became Arizona Fertilizer which later became Arizona Fertilizer and Chemical. In 1961 Arizona Agrochemical Corporation (Arizona Agrochem) bought Arizona Fertilizer and Chemical. Pesticide formulation operations were initiated by Arizona Fertilizer and Chemical, therefore pesticide formulation operations at the site probably started several years before 1961. Erly Industries bought Arizona Agrochem in 1968. Valley Nitrogen bought Arizona Agrochem in 1971 and relocated the pesticide formulation operations to Chandler, Arizona. Erly Industries began operations at the site for Chemonics Industries, Chemonics Laboratories, and Chemonics Scientific in 1971. Erly Industries sold Chemonics Laboratories in 1985 and Chemonics Scientific in 1988. S&H Cabinets operated near the site from 1985 to 1987. S&H Cabinets moved back to 912 East Southern Pacific Drive in December 1989.

Apparently, Southwestern Agrochemical Corporation (Southwestern) was not one of the businesses that operated at the site. Southwestern conducted its operations in Chandler.

CONTACT REPORT

AGENCY/AFFILIATION: Arizona Department of Environmental Quality		
DEPARTMENT: Water Quality Revolving Fund Unit, West Central Phoenix Area		
ADDRESS/CITY: 2005 North Central Avenue, Phoenix		
COUNTY/STATE/ZIP: Maricopa County, Arizona 85004		
CONTACT(S)	**TITLE**	**PHONE**
1. Michelle Kinard	Hydrologist	602-257-2137
2.		
E & E PERSON MAKING CONTACT: Robert Easley		**DATE:** 8/15/90
SUBJECT: Municipal Wells		
SITE NAME: Chemonics Lab Div McKenzie		**EPA ID#:** AZD057907883

Michelle is aware of two municipal wells closed in 1982 due to trichloroethene contamination, City of Phoenix wells 70 and 71. These wells are located at 3847 and 3851 West Earll Drive, approximately 2.7 miles northwest of the site. Michelle said groundwater flow currently flows towards the west. However, due to the influence of municipal wells in the 1980s, groundwater flow in 1982 near these two municipal wells flowed toward the northwest. Well number 71 was also contaminated with trans-1,2-dichlorethene. The plume near these two municipal wells is at the highest concentration from Thomas Road to Indian School Road and from 35th Avenue to 46th Avenue. However, Michelle noted that the plume has not been well studied and more studies need to be conducted to more accurately define the extent of the plume. ADEQ is currently investigating potential sources of the municipal well contamination in the West Central Phoenix Study Area.

SITE RECONNAISSANCE INTERVIEW AND OBSERVATIONS REPORT

Ecology and Environment, Inc.		
Field Investigation Team (FIT)		
160 Spear Street, Suite 1400		
San Francisco, California 94105		
(415) 777-2811		
E & E PERSON(S) CONDUCTING INTERVIEW AND MAKING OBSERVATIONS:		
Robert Easley, Paul Brown, Cris Nelson		
FACILITY REPRESENTATIVE(S):	**TITLE:**	**PHONE:**
Lloyd Aderhold	Director Environmental Safety	602-262-5401
David Grisa	Project Environmental Scientist	602-894-9466
Kathy Lacey	Laboratory Director	602-470-0756
SITE NAME: Chemonics Lab Div McKenzie		**DATE:** 5/23/90
CITY/STATE: Phoenix, Arizona		**EPA ID#:** AZD057907883

The following information was obtained during the interview:

At 8:30, FIT met with Lloyd Aderhold of Chemonics Industries, Inc. (Chemonics), David Grisa of Earth Technology Corporation, and Kathy Lacey of McKenzie Laboratories at 734 East Southern Pacific Drive. Lloyd Aderhold is the Director of Environmental Safety for Chemonics. David Grisa was the Health and Safety Manager of Chemonics for one and a half years. David quit Chemonics approximately four months ago and currently works for Earth Technology Corporation. Kathy Lacey worked for Chemonics Laboratories since 1965. Kathy bought McKenzie Laboratories from Chemonics in 1985.

FIT discussed the history of the property located at 734 E Southern Pacific Drive and the operations which currently take place at the property. Southern Pacific Transportation Corporation was the earliest company known to operate at 734 E Southern Pacific Drive and, to date, still own and lease this property to Chemonics. In 1932, Southern Pacific Corporation leased the property to Arizona Natural Products. Arizona Natural Products produced fertilizers. During the 1940's, Southern Pacific leased the property to Southwestern Corporation. Southern Pacific leased the property to Arizona Agrochemical Corporation during the 1950s and the 1960s. Two other fertilizer producing companies which operated at 734 E Southern Pacific Drive are Arizona Fertilizer and Valley Nitrogen. Lloyd has not yet found any

files of Arizona Agrochem. According to David, Arizona Agrochem primarily used the property for pesticide formulation. This process consisted of blending the pesticides with a carrier, such as a dust, to prepare the pesticide for application in the field. Obviously, due to the long history of the site, no one could remember all the former companies that operated at the site.

Chemonics subleased the 734 E Southern Pacific Drive property to three other companies in the past: Government Innovators, Alameda Chemical and Scientific, and McKenzie Laboratories. Government Innovators manufactured garbage trucks or residential mechanized refuse collection systems. Government Innovators may have generated some solvent waste when they painted the trucks outside. Government Innovators relocated to 1500 South 7th Street, Phoenix, Arizona in October 1989. McKenzie Laboratories operated an agricultural laboratory. McKenzie Laboratories tested soil and water samples for nutrient contents and for pesticide residues. Due to expansion, McKenzie Laboratories relocated their operations to 3725 East Atlanta Avenue, Phoenix, Arizona in October 1989. Alameda Chemical and Scientific was part of Chemonics Laboratories until it was sold in 1988. Alameda is located at 922 East Southern Pacific Drive and is still a sublessee of Chemonics. Currently, Alameda uses their property at 922 E Southern Pacific Dr. as a warehouse to store and resell chemicals. They do not manufacture or repackage the chemicals at 922 E Southern Pacific Dr.

Chemonics Industries currently subleases their property to Canyon Industries, Leffingwell, S & H Cabinets, and Available Metals Refining. Leffingwell uses the property as a warehouse for numerous chemicals, such as fertilizers and pesticides. S&H Cabinets builds cabinets and other furniture on site. The address for S&H Cabinets is 912 East Southern Pacific Drive. A separate interview was conducted with Available Metals. The Arizona Department of Environmental Quality has already conducted a Preliminary Assessment of Canyon Industries.

Chemonics Industries, Inc., is a fire retardant manufacturer for the Department of Forestry. Their office at 734 E Southern Pacific Dr. presently acts as their corporate office. To date, Chemonics uses the property for research and development. This primarily entails storing the fire retardant in 10-gallon plastic containers in the sun and in a warehouse for 2 to 3 years in order to test the stability of the retardant. The fire retardant is made up of sodium ferrocyanite. Several hundred pounds of fire retardant are stored on site for testing and for the sale and distribution of the retardant to the Department of Forestry. Chemonics also fabricates large mixers on site. Fabrication of the mixers entails cutting, sand blasting, and welding the steel mixers. The mixers are basically large metal storage tanks with a motor to mix the fire retardant in the field into a liquid concentrate. In the field, the fire retardant is then pumped from the mixers to airplane tanks for aerial spraying. According to Lloyd, Chemonics does not presently use any solvents on site. He said he had Material Safety Data Sheets available for review. Lloyd confirmed that there are three dry wells and at least one storm drain on site. Chemonics currently has 10 employees working on site.

re/chem/recon

The following observations were made during the site reconnaissance visit:

Immediately south of the site, on the other side of Southern Pacific Dr. is a paved lot used for railroad cars. South of the lot, is a small residential area consisting mostly of lower income houses. The closest house is approximately 100 yards south of the site. The Southern Pacific Railroad along with a railroad stock yard and railroad refuse lie to the north and to the east of Chemonics. Other industrial buildings lie west of Chemonics. Many of the buildings have been abandoned. An industrial steel distributor and a light fixture manufacturer once occupied the abandoned buildings west of Chemonics. Capitol Engineering Company borders Chemonics on the west side.

The entire Chemonics property is surrounded by an 8-foot-high fence. The gates to the entrance of Chemonics are locked at night and the property is patrolled by a security guard 24 hours a day. A city storm drain lies just outside the entrance to Chemonics on Southern Pacific Dr. According to David Grisa this storm drain flows from the east to the west. The ground surface at the site is flat and approximately 80 percent of it is paved. While the site is fairly flat, David Grisa believes that surface water runoff generally drains from the east to the west.

On the west side of the property lies the former Government Innovators building. Currently, Chemonics uses the building to store records of the company, fire retardant, and the large mixers. Most of the building is elevated several feet above the ground surface. There is a small area in the southwest corner of the building that was once used as a loading dock. Outside the former Government Innovators building is a concrete pad where the garbage trucks were painted. There is also a storm drain in this area which drains into the storm drain outside the Chemonics entrance on Southern Pacific Drive.

On the north side of the property is the Leffingwell warehouse. The Leffingwell warehouse stores numerous chemicals such as fertilizers and deer and rabbit repellent. Most of the chemicals were stored in white plastic containers and in white plastic bags. FIT did not observe any leaks or odors in the Leffingwell building. On the south side of the Leffingwell building was a small caged area containing approximately five 55-gallon drums and five 40-gallon olive drums. The contents of the drums were not known, but Lloyd assured FIT that they all contained chemicals used in the fire retardant and none of them contained solvents.

In the center of the property are several hundred pounds of stored fertilizer. Some of the fertilizers are stored in 10-gallon plastic jugs in the sun in order to test their stability. Most of the fertilizers are stored in plastic bags in a shack. A dry well was identified in the center of the property near the Available Metals facility. The dry well is approximately 25 feet deep and was constructed between 1979 and 1980 in order to facilitate the poor

drainage on site.

On the Southeast side of the property is the former McKenzie laboratory. On the north side of the McKenzie laboratory are two empty 55 gallon drums and a storm drain. The south side of the McKenzie building is bordered by Southern Pacific Dr. with a small 4-foot corridor between the McKenzie building and the fence surrounding the site. FIT observed an old rusty evaporating pan along this small corridor. The evaporating pan is 12 feet long, 2 feet wide, and 1 foot deep. Another evaporating pan was underneath the first pan to catch any leaks from the first pan. A small overhang from the McKenzie building was above the evaporating pan to prevent rain water from filling up the evaporating pan. According to Kathy Lacey of McKenzie Laboratories, the evaporating pan has not been used for at least 10 years. The inside of the former McKenzie building was empty. No bottles or chemicals were being stored inside the building.

re/chem/recon

SITE RECONNAISSANCE INTERVIEW AND OBSERVATIONS REPORT

Ecology and Environment, Inc.		
Field Investigation Team (FIT)		
160 Spear Street, Suite 1400		
San Francisco, California 94105		
(415) 777-2811		
E & E PERSON(S) CONDUCTING INTERVIEW AND MAKING OBSERVATIONS:		
Robert Easley		
FACILITY REPRESENTATIVE(S):	**TITLE:**	**PHONE:**
Edward Isaac	President	602-252-6146
John Davis	Foreman	602-252-6146
SITE NAME: Chemonics Lab Div McKenzie		**DATE:** 5/23/90
CITY/STATE: Phoenix, Arizona		**EPA ID#:** AZD057907883

The following information was obtained during the interview:

FIT met with Edward Isaac and John Davis of Available Metals Refining (Available Metals) at 10:30 AM. Available Metals are refiners of precious metals. Available Metals primarily reclaims gold and silver from the electric circuit boards of computers. This process involves receiving the computer boards from various computer manufacturers, shredding the circuit boards, incinerating the boards, extracting the gold with cyanide solutions, electrolitically precipitating the gold out of the cyanide solutions, and melting the gold in a furnace. The cyanide bath remaining from electrolysis is melted in a furnace and the resulting cyanide sweep (ash) is sold to a refinery for further processing. The incineration of the circuit boards provides approximately 95 percent of the reduction of the circuit boards to gold. The copper wires from the computers are sold to scrap yards. Particulates from the incinerator are filtered out with a fiberglass, Teflon coated baghouse. According to Ed, no cyanide wastes are generated or disposed of during this refining process because the cyanide ash or sweep is sent to a refinery for further refining. Even the Teflon coated baghouses are incinerated in order to reclaim the precious metals contained or filtered in the baghouse. According to Ed, Available Metals does not use any solvents in its chemical processes to extract gold.

According to Edward Isaac, Available Metals has an Air Quality permit for its incinerator. Available Metals is exempt from RCRA regulations

because it is a recycler. Ed said that Brian Cox of the EPA inspected the site on June 5, 1990. Ed said that EPA took photographs of the chemical process. According to Ed and John, the railroad has spilled chemicals from the rail cars. They have also complained of chemical odors from the rail cars. According to John, the City of Phoenix Fire Department has removed drums of unknown contents from behind the Chemonics property.

The following observations were made during the site reconnaissance visit:

The Available Metals facility is located on the north side of the 734 E Southern Pacific Drive property. This area is flat and is not paved. Due to security reasons, the Available Metals facility is surrounded by a fence and the gate to the facility is locked at all times. Available Metals also has its own security guard and cameras which continuously monitor its warehouse. The main building of Available Metals has an office on the east and west side and acts as its main warehouse. The main building also has a loading dock to receive its materials. In the western portion of the main building are approximately 30 55-gallon drums of cyanide. The drums appeared to be in good condition with no visible leaks. Most of this cyanide is cyanide which has been through a gold extraction and is being settled to form a sludge. An air recirculation mechanism lies above the drums which recirculates the air near the drums to the outside. There is also a large evaporating barrel which heats up the cyanide extractions to facilitate the formation of the sludge. There is also a small lab near the drums which tests for the content of gold and silver.

On the east side of the main building are the shredder and the furnace to melt the cyanide sludge. This area is out in the open and covered with a roof. East of the furnace is the incinerator. East of the shredder are more storage area and two old cyanide slurry troughs. These troughs are no longer used. They are approximately 10 feet long, 3 feet wide, and 3 feet deep. A 55-gallon barrel of waste oil was discovered in this area. It is not clear where this oil originates.

Available Metals has another building west of the main building. The building has one hammer mill and two ball mills which act as crushers. The cyanide sweep is also stored in this area along with more computer circuit boards.

Between the main building and the western building, is the main storage area for Available Metals. This area has approximately 100 55-gallon drums containing electric circuit boards, computer wiring, old baghouses for the incinerator, and other refuse from computers. Many of the drums are empty.

SITE RECONNAISSANCE INTERVIEW AND OBSERVATIONS REPORT

Ecology and Environment, Inc.		
Field Investigation Team (FIT)		
160 Spear Street, Suite 1400		
San Francisco, California 94105		
(415) 777-2811		
E & E PERSON(S) CONDUCTING INTERVIEW AND MAKING OBSERVATIONS:		
Robert Easley, Paul Brown, Chris Nelson		
FACILITY REPRESENTATIVE(S):	**TITLE:**	**PHONE:**
David Porter	Mechanical Engineer	602-252-5754
Edward Ricci	Vice President, WRA	602-381-1844
Ken Hodson	Lawyer, Robbins and Green	602-245-7624
SITE NAME: Chemonics Lab Div McKenzie		**DATE:** 5/23/90
CITY/STATE: Phoenix, Arizona		**EPA ID#:** AZD057907883

The following information was obtained during the interview:

FIT met with David Porter of Capitol Engineering Company (Capitol), Edward Ricci of Water Resources Associates, Inc., and Ken Hodson of Robbins and Green at 1:00 pm on May 23, 1990. Edward Ricci is an environmental consultant for Capitol. Ken Hodson is Capitol's attorney. Capitol has conducted business at 724 East Southern Pacific Drive since the 1950s. Capitol fabricates various metal components such as valves, fans, cyclones, and hoppers. Capitol's use of hazardous chemicals is confined to the shop area where Capitol paints metal components. Capitol stores paint and paint thinner on site in two 55-gallon drums. Safety-Kleen picks up these two drums once a month. Pesticide contamination has been discovered behind the Capitol building in the area commonly called the rail spur area. This contamination was discovered by Edward Ricci when he conducted a site investigation of the Capitol property for Capitol in 1989 and 1990. During this investigation he also discovered trichloroethane and dichloroethane contamination in a sump at 419 South 7th Street and in a drain on South 7th Street.

Capitol bought the rail spur area from the Southern Pacific Transportation Company several years ago. Capitol does not use the rail spur area for anything except as a deterrent to theft. Capitol

bought the rail spur area so they could put a fence behind the warehouse to prevent thefts from occurring. Capitol has had equipment stolen from their property without the fence and Southern Pacific would not let them put in the fence as long as Capitol did not own the rail spur area. The door from the shop area to the rail spur area is locked and the employees for Chemonics do not use the rail spur area for anything.

The following observations were made during the site reconnaissance visit:

The Capitol facility is located at 724 East Southern Pacific Drive. The Capitol property consists of an office, a warehouse called the shop area, and a backyard lot called the rail spur area. All activities involving the fabrication of metal components occur in the warehouse including the receiving of sheet metal, metal sheering, metal pressing and welding. The painting of the metal components occurs outside the warehouse on the south side of the property. FIT observed one 55-gallon drum of paint thinner and one 55-gallon drum of paint.

On the north side of the Capitol building lies the rail spur area. The rail spur area owned by Capitol is approximately 25 yards wide by 130 yards long. This area is not paved and is surrounded by a 9-foot high barbed wire fence. This area did have an odor of pesticides.

APPENDIX B

PHOTODOCUMENTATION

FIELD PHOTOGRAPH LOG SHEET

DATE: [illegible]

TIME: [illegible]

DIRECTION:

south

WEATHER:

Hot and Sunny

PHOTOGRAPHED BY:

[illegible]

DESCRIPTION:

This picture was taken along the [illegible] background.

DATE: [illegible]

TIME: [illegible]

DIRECTION:

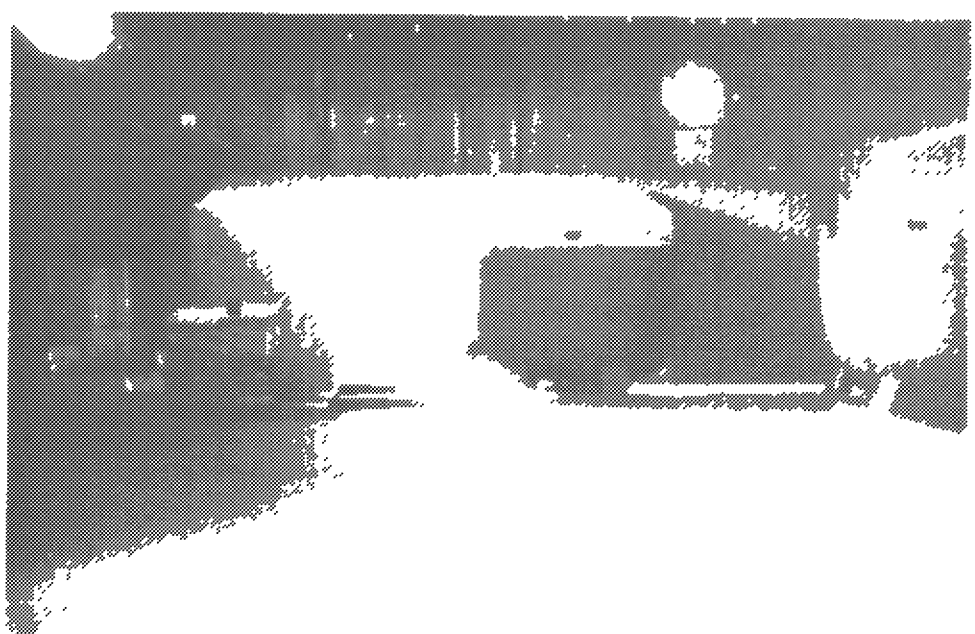
north

WEATHER:

Hot and Sunny

PHOTOGRAPHED BY:

[illegible]



DESCRIPTION:

This picture was taken inside the [illegible] building [illegible] retardant and fire retardant [illegible].

FIELD PHOTOGRAPHY LOG SHEET

DATE: 5/23/90

TIME: 9:45

DIRECTION:

South

WEATHER:

Hot and Sunny

PHOTOGRAPHED BY:

Chris Nelson

DESCRIPTION:

This picture was taken from the center of the ISA property. The fire retardant storage shed is in the background. The plastic bags in the foreground also contain fire retardant.

DATE: 5/23/90

TIME: 10:30

DIRECTION:

West

WEATHER:

Hot and Sunny

PHOTOGRAPHED BY:

Chris Nelson

DESCRIPTION:

In the foreground is a dry well located behind the Available Metals facility.

0113

5/28

REPORT TRANSMITTAL

Date delivered to H-8-1: August 29, 1990

A copy of this Preliminary Assessment for [redacted] should be sent to the following agency and individuals:

Lowell Carty
Arizona Department of Environmental Quality
2005 North Central Avenue
Phoenix, Arizona 85004

Ed Ricci
Water Resources Associates, Inc.
2702 North 44th Street, Suite 101-B
Phoenix, Arizona 85008

Lloyd Aderhold
Chemonics Industry, Inc.
P.O. Box 21568
Phoenix, Arizona 85036

Edward Isaac
Available Metals Refining
P.O. Box 2711
Phoenix, Arizona 85002

David Porter
Capitol Engineering Co.
724 E. Southern Pacific Drive
Phoenix, Arizona 85034

fax Less.

re/chem/trans